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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/256,411	02/24/1999	TAEKO TANAKA	1232-4512	9777

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EXAMINER	
HANNETT, JAMES M	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/256,411	TANAKA, TAEKO	
	Examiner	Art Unit	
	James M Hannett	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,16-18,20, 21, 23-25 and 27-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11-14,16-18,20,21,23-25 and 27-29* is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 February 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11/15/2004 have been fully considered but they are not persuasive.

The applicant argues that the prior art does not teach the control step of controlling to change a focus speed for compensating a change of a focal position caused by the zooming operation.

The examiner disagrees, Suda specifically states in Paragraph [0028], Line 13-15 determining a driving velocity of the focus lens while compensating for a movement of a focal plane caused by the zooming operation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1: Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,331,367 Kawasaki et al in view of US-PGPUB 2002/0109784 Suda et al.

2: As for Claim 1, Kawasaki et al teaches in the abstract an image sensing method. Kawasaki et al teaches the use of a power zoom lens having a zoom mechanism. Kawasaki et al teaches the use of a shutter mechanism for controlling the shutter speed of a camera which upon changing the shutter speed changes the amount of time charge will be allowed to be accumulated

or stored on an image sensing element. Kawasaki et al teaches on Column 59, Lines 50-63 the use of a control step of mid-exposure zooming in that a zooming speed is selected in accordance with the exposure time or shutter speed.

Kawasaki et al does not teach the use of a camera that has a focusing step that performs a focusing operation during a zooming operation so that an in focus state can be achieved while zooming. Furthermore, Kawasaki et al does not teach the use of controlling to change a focus speed in the zooming step.

Suda et al teaches in the abstract the use of an image sensing apparatus in the form of a camera which can perform a zooming operation of a zoom lens while maintaining an in-focus state of a focus lens. Suda et al teaches on Paragraph [0002 and 0153] the use of signal detection means for extracting a high-frequency component from an image-sensing signal obtained by an image-sensing device such as a CCD, and detecting a sharpness signal. Suda et al teaches on Paragraph [0032] the use of signal extraction means for extracting a peak value of a luminance component in an image-sensing signal. Suda et al teaches in the abstract the use of evaluation value calculating means for averaging sharpness signals during a zooming operation to calculate a focus evaluation value. Suda et al teaches that the focus evaluation value is calculated in accordance with a plurality of focus detection means. Furthermore, Suda et al teaches on Paragraph [0028] the use of speed calculation means for determining a driving velocity of a focus lens in order to compensate the velocity of the focus lens for movement cause by the zooming operation of the zoom lens. Suda teaches on Paragraph [0028, 0068 and 0071] a zoom lens for performing a zooming operation and a focus lens for maintaining an in-focus state during the zooming operation. Suda teaches that the lens assembly is an inner focus type, so the

focus plane moves when the zoom lens is driven. Suda specifically states determining a driving velocity of the focus lens while compensating for a movement of a focal plane caused by the zooming operation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Kawasaki et al to perform a zooming operation of a zoom lens while maintaining an in-focus state of a focus lens as taught by Suda et al in order to enable a user to view an in focus image while zooming, and to change the speed of a focusing operation in order to compensate the velocity of the focus lens for movement cause by the zooming operation of the zoom lens.

3: As for Claim 2, Kawasaki et al teaches on Column 59, Lines 50-63 the control step of mid-exposure zooming varies the zoom speed when the exposure time is longer than a predetermined time. Therefore, because shutter speed increases as exposure time decreases the process of controlling to decrease the zoom speed occurs when the shutter speed is not more than a predetermined value. Kawasaki et al teaches that the zoom speed is varied by adding a delay equal to one half of the exposure time. Therefore, decreasing the zoom speed when the shutter speed is not more than a predetermined value.

4: As for Claim 3, Claim 3 is rejected for reasons discussed related to Claim 1, since Claim 1 is substantively equivalent to Claim 3.

5: As for Claim 4, Claim 4 is rejected for reasons discussed related to Claim 2, since Claim 2 is substantively equivalent to Claim 4.

6: In regards to Claim 5, Kawasaki et al teaches in the abstract an image sensing method.

Kawasaki et al teaches the use of a power zoom lens having a zoom mechanism. Kawasaki et al teaches on Column 6, Lines 40-60 the use of a focus adjustment for correcting movement of a focus plane upon movement of a zoom lens by using a focus lens. Kawasaki et al teaches on Column 6, Lines 40-60 a driving step of independently moving a zoom lens and a focus lens parallel to an optical axis since the automatic focus lens and zooming lens are controlled by independent motors. Kawasaki et al teaches on Column 5, Lines10-14 the selection step of selecting a charge storage time or shutter speed on the basis of information including the photometric signal and film speed, of an image-sensing element. Kawasaki et al teaches the use of a shutter mechanism for controlling the shutter speed of a camera which upon changing the shutter speed changes the amount of time charge will be allowed to be accumulated or stored on an image sensing element. Kawasaki et al teaches on Column 59, Lines 50-63 the use of a control step of mid-exposure zooming in that a zooming speed is selected in accordance with the exposure time or shutter speed.

Kawasaki et al does not teach the use of a camera that has a focusing step that performs a focusing operation during a zooming operation so that an in focus state can be achieved while zooming. Furthermore, Kawasaki et al does not teach the use of controlling to change a focus speed in the zooming step.

Suda et al teaches in the abstract the use of an image sensing apparatus in the form of a camera which can perform a zooming operation of a zoom lens while maintaining an in-focus state of a focus lens. Suda et al teaches on Paragraph [0002 and 0153] the use of signal detection means for extracting a high-frequency component from an image-sensing signal obtained by an image-sensing device such as a CCD, and detecting a sharpness signal. Suda et al teaches on

Paragraph [0032] the use of signal extraction means for extracting a peak value of a luminance component in an image-sensing signal. Suda et al teaches in the abstract the use of evaluation value calculating means for averaging sharpness signals during a zooming operation to calculate a focus evaluation value. Suda et al teaches that the focus evaluation value is calculated in accordance with a plurality of focus detection means. Furthermore, Suda et al teaches on Paragraph [0028] the use of speed calculation means for determining a driving velocity of a focus lens in order to compensate the velocity of the focus lens for movement cause by the zooming operation of the zoom lens. Suda teaches on Paragraph [0028, 0068 and 0071] a zoom lens for performing a zooming operation and a focus lens for maintaining an in-focus state during the zooming operation. Suda teaches that the lens assembly is an inner focus type, so the focus plane moves when the zoom lens is driven. Suda specifically states determining a driving velocity of the focus lens while compensating for a movement of a focal plane caused by the zooming operation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Kawasaki et al to perform a zooming operation of a zoom lens while maintaining an in-focus state of a focus lens as taught by Suda et al in order to enable a user to view an in focus image while zooming and to change the speed of a focusing operation in order to compensate the velocity of the focus lens for movement cause by the zooming operation of the zoom lens.

7: In regards to Claim 6, Kawasaki et al teaches on Column 59, Lines 50-63 the control step of mid-exposure zooming varies the zoom speed when the exposure time is longer than a predetermined time. Therefore, because shutter speed increases as exposure time decreases the

process of controlling to decrease the zoom speed occurs when the shutter speed is not more than a predetermined value. Kawasaki et al teaches that the zoom speed is varied by adding a delay equal to one half of the exposure time. Therefore, decreasing the zoom speed when the shutter speed is not more than a predetermined value.

8: As for Claim 7, Claim 7 is rejected for reasons discussed related to Claim 5, since Claim 5 is substantively equivalent to Claim 7.

9: As for Claim 8, Claim 8 is rejected for reasons discussed related to Claim 6, since Claim 6 is substantively equivalent to Claim 8.

10: As for Claim 9, Claim 9 is rejected for reasons discussed related to Claim 1, since Claim 1 is substantively equivalent to Claim 9.

11: As for Claim 10, Claim 10 is rejected for reasons discussed related to Claim 2, since Claim 2 is substantively equivalent to Claim 10.

Allowable Subject Matter

12: Claims 11-14, 16-18, 20, 21, 23-25 and 27-29 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach the method wherein the evaluation value calculation device includes an averaging time table set in correspondence with various zoom speeds, determines the various zoom speeds by referring to the averaging time, and calculates the focus evaluation value. Furthermore, the prior art does not teach the use of changing the focusing speed and the time during which the sharpness signals are averaged in response to the zooming operation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hannett whose telephone number is 571-272-7309. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2612

JMH
February 10, 2005